

## REMEDIATION AND REDEVELOPMENT (RR) NEWS FROM WISCONSIN DNR February 18, 2004

### DNR SCHEDULES PUBLIC HEARINGS FOR SAG RULE CHANGES

The RR Program is proposing revisions to the Site Assessment Grant (SAG) rules, NR 168, Wis. Adm. Code. The changes are intended to clarify the grant process and address questions that have arisen in administering the grants. In January the Natural Resources Board (NRB) approved public hearings on the revisions, and hearings have now been scheduled for TUESDAY, MARCH 16, at 9:00 a.m. at:

\* Eau Claire: Room 139, State Office Building, 718 W. Clairemont Ave., Eau Claire

\* Green Bay: Room 618, State Office Building, 200 N. Jefferson St., Green Bay

\* Madison: Room 227, UW-Madison Pyle Center, 702 Langdon St.

\* Milwaukee: Room 98, State Office Building, 819 N. 6th St.

You may attend the public hearings in person at the Madison location, or by video conference at any of the other locations. You can find more information about the proposed rule changes at [http://dnr.wi.gov/org/aw/rr/wi\\_regs/index.htm#anchor74198](http://dnr.wi.gov/org/aw/rr/wi_regs/index.htm#anchor74198), including a background memo, the proposed new language and a fiscal estimate. If you have questions, please contact Michael Prager at [Michael.Prager@dnr.state.wi.us](mailto:Michael.Prager@dnr.state.wi.us), or at 608-261-4927.

### CONSULTANT REMINDER – CERTIFICATION REQUIREMENTS

Consultants are reminded that they must follow the requirements of ss. NR 712.09, submittal certification, when they submit plans and reports to the RR Program. This section provides consultants with the appropriate certification statements to include in their submittals, i.e. “I, \_\_\_\_\_, hereby certify that I am a (scientist, hydrogeologist, engineer)”. In some cases it is not clear which company is responsible for a submittal. Consultants should identify all authors of a submittal, and include the name of the company that employs them. If consultants’ clients are submitting a plan or report directly to DNR, and including language prepared for them by the consultant, all authors should be identified, as well as the portion of the report written by each.

### EPA GREAT LAKES FUNDING

EPA offers a number of funding opportunities related to the Great Lakes, including assessment, source control and evaluation of remedial alternatives for contaminated sediments. Proposals are due at the end of March. For more information, please see <http://www.epa.gov/glnpo/fund/glf.html>.

### COLLOIDIAL MOVEMENT OF PAHS IN GROUNDWATER

In the February 4th “RR News from DNR” we included an item titled “Do Not Filter PAH Samples”, describing how filtering groundwater when testing for polycyclic aromatic hydrocarbons (PAHs) results in PAHs sticking to the filter. The RR Program’s Technical Focus Group discussed this topic during its February meeting, and DNR would like to share this additional information.

PAHs strongly sorb to soil surfaces and have a low water solubility. Based on chemical behavior alone, one would not expect to find PAHs in groundwater. However, PAHs can be transported through vadose zone soils and groundwater on the surface of colloidal particles. Colloids are very small particles that range from 100 – 300 nanometers (nm). For comparison, bacteria range in size from 100 nm to 600,000 nm. Colloids are composed of inorganic or organic materials and have been found in high concentrations in groundwater downgradient from petroleum spills. When petroleum in the subsurface degrades, PAHs are released, can sorb to these very small particles, and then become transported in groundwater. In this way, PAHs can be found in groundwater at concentrations hundreds of times higher than would be expected based on water solubility alone.

When sampling for PAHs, it is recommended that low flow pumping be used to purge the monitoring well. This helps reduce the movement of fine soil particles and colloids into the well. Groundwater samples must NOT be filtered when sampling for PAHs because the colloidal-PAHs will sorb on the filter material, giving erroneously low results. In fine grain soils, it may be difficult to exclude soil particles from the groundwater sample even with low flow sampling. Groundwater monitoring wells in areas of the original petroleum release (source zone) may show increased

PAHs due to the surrounding contaminated soils rather than actual transport of the PAHs in the groundwater. For these sites, it is important to properly site downgradient monitoring wells to assess whether the PAHs are being transported through groundwater or are restricted to the source zone. Remedy selection should address the PAHs, whether they are restricted to the source zone or are being transported in the groundwater.

Recent references on PAH transport in soil and groundwater can be found at:

\* [Abstract] Release of colloids and polycyclic aromatic hydrocarbons from a contaminated soil under natural conditions by S. Jann, K.U. Totsche and I. Kögel-Knabner  
<http://www.cosis.net/abstracts/EAE03/06373/EAE03-J-06373.pdf>

\* Investigating the Potential for Colloid- and Organic Matter-Facilitated Transport of Polycyclic Aromatic Hydrocarbons in Crude Oil-Contaminated Ground Water by Joseph N. Ryan, George R. Aiken, Debera A. Backhus, Karen G. Villholth, and Christine M. Hawley  
<http://mn.water.usgs.gov/bemidji/results/JoeRyan.pdf>

#### CORRECTION – FOND DU LAC & OSHKOSH GREENSPACE GRANTS

The February 13th "RR News from DNR" included an item about DNR's first-ever brownfield Green Space and Public Facilities grants. However, the grant amounts were transposed. Oshkosh actually received a \$200,000 grant for its Riverside Park project, and Fond du Lac received a \$50,000 grant for the Quick Freeze site. More information about these two grants is available at [http://www.wisgov.state.wi.us/pressreleases\\_detail.asp?prid=397](http://www.wisgov.state.wi.us/pressreleases_detail.asp?prid=397). The Governor plans to announce additional Green Space and Public Facilities Grants in March and April. Background information about this grant program is available at [http://dnr.wi.gov/org/aw/rr/rbrownfields/greenspace\\_grant.htm](http://dnr.wi.gov/org/aw/rr/rbrownfields/greenspace_grant.htm).

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